C-11

CELLULOSE COATED ELECTRODE FOR VERTICAL DOWN WELDS IN LARGE DIAMETER CROSS- COUNTRY PIPELINES

DATA SHEET NO. 2

SPECIFICATION	AWS A5.1	BS EN ISO 2560-B	JIS Z 3211
CLASSIFICATION	E6011	E4311	D4311

PRODUCT DESCRIPTION

The electrode contains some 35% of organic materials which in the arc transform into a shielding gas and contributes to a concentrated deep penetrating arc with a fast-freezing slag. The flux is extruded onto a mild steel core wire using only potassium silicates which ensures coating strength.

WELDING FEATURES OF THE ELECTRODE

The electrode is suited for use on AC or DC+ and is ideal for full penetration root runs using a controlled root gap and root face and a stringer bead technique. Slight grinding of the stringer bead with wire brushes prevents lateral inclusions followed by a hot pass that particularly on high stressed and or high carbon steels promotes hydrogen diffusion and thus reduces the probability of hydrogen induced cracking.

APPLICATIONS AND MATERIALS TO BE WELDED

Cross country pipelines - on site storage tanks in following materials - mainly root pass:

Mild Steels: St 360 C-St 510 C, St 34.2, St 37.2, St 46.2, St 37.3, St 46.3, St 52.3.
Pressure vessel steels: H1, H11, St 35 KKW, St 41 KKW.
High strength steels: St 52, St 35.4, St 45.4, St 52.4, St E210.7-St E415.7, St E290.7TM-St E415.7TM, St 35.8, St 45.8.
API 5LX: X42, X46, X52, X56, X60.
May also be used in root runs for higher tensile steels.

WELD METAL ANALYSIS COMPOSITION % BY Wt.

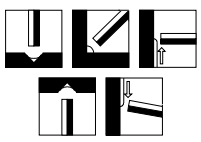
	C	Mn	Si	S	P	Cr	Ni	Mo	V	Fe
MIN	-	-	-	-	-	-	-	-	-	
MAX	0.2	1.2	1.0	-	-	0.2	0.3	0.3	0.08	
TYPICAL	0.1	0.5	0.2	0.03	0.02	0.04	0.04	0.01	0.003	Bal.

WELD METAL PROPERTIES (ALL WELD METAL)

PROPERTY	UNITS	MINIMUM	TYPICAL	OTHERS
Tensile strength	N/mm^2	430	500	
0.2% Proof stress	N/mm^2	330	430	
Elongation on 4d	%	22	30	
Reduction of Area (RA)	%	-	70	
Impact energy –30°C	J	27	40	

WELDING AMPERAGE AC or DC+

Ø (mm)	2.6	3.2	4.0
MIN	70	90	130
MAX	90	130	180



OTHER DATA	Electrodes that have become damp should be re-dried at 60°C for 30 mins.
APPROVED BY	LR and ABS - Grade 3